

### Claims

1. Hydraulic control system for controlling a hydraulic consumer actuating a working tool of a mobile equipment, comprising a control block, through the regulator of which a pump and a tank may be connected with a pressure medium delivery connected to the consumer or with a pressure medium-drain, and oscillation damping means whereby oscillations during stopping of the working tool may be attenuated by opening a connecting line between delivery and drain, characterized in that the oscillation damping means comprise two pilot-controlled shut-off valves arranged in opposite directions in the connecting line, whereby the connecting line may be opened when the pressure in the drain rises, wherein the shut-off valves may be subjected to the pressure in the delivery and in the drain, respectively, in the opening direction and also to this pressure and to the force of a spring in the closing direction, and wherein in a predetermined position of the regulator the drain-side shut-off valve may be subjected to the tank pressure or to another low pressure in the closing direction.
2. The control system in accordance with claim 1, wherein an attenuation nozzle is arranged in the connecting line between the shut-off valves.
3. The control system in accordance with claim 1 or 2, wherein the connecting line and the shut-off valves are integrated into the regulator.

4. The control system in accordance with claim 3,  
wherein the regulator has an axial bore wherein the  
shut-off valves are inserted.
- 5 5. The control system in accordance with claim 4,  
wherein the axial bore is enlarged on both sides into  
spring chambers for a spring of the respective shut-  
off valve, whereby a valve body is biased against a  
valve seat formed by a radial shoulder of the axial  
10 bore.
6. The control system in accordance with claim 5,  
wherein the valve body is executed with an area  
difference, so that an annular surface acting in the  
15 opening direction may be subjected to the drain  
pressure.
7. The control system in accordance with claim 5 or 6,  
wherein the regulator has jacket recesses whereby the  
20 connection between the spring chamber and a tank port  
may be controlled open following a stroke of the  
regulator.
8. The control system in accordance with claim 6 or 7,  
25 wherein the valve body is a hollow piston and has a  
nozzle bore, and the regulator has radial bores  
whereby the spring chamber may be subjected to the  
drain pressure.
- 30 9. The control system in accordance with any one of  
claims 5 to 8, wherein the stroke of the valve body  
is limited by a stop sleeve.
10. The control system in accordance with any one of  
35 claims 5 to 9, comprising two nozzles in the jacket

5 of the regulator, whereby the spring chambers of the shut-off valves may be subjected to supply pressure and drain pressure, respectively, wherein the drain-side nozzle may be closed following an initial stroke of the regulator and/or by the valve body.

10 11. The control system in accordance with claim 8 and 10, wherein the nozzle and the nozzle bore are arranged in parallel.

12. The control system in accordance with any one of claims 5 to 11, wherein the valve body is guided in the regulator in a close fit, so that the spring chamber is sealed along this guidance.

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